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THE SONIC ENVIRONMENT AND HUMAN BEHAVIOR

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THE SONIC ENVIRONMENT AND HUMAN BEHAVIOR

by

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Noise, or annoying sound, has begun to get increasing attention as an important factor in the satisfaction and desired task reinforcement provided by the physical environment. There is considerable evidence as to the logical effects of unwanted sound, be it the quality or the quantity (decibel). These effects can be manifested as dilation of the pupils of the eyes, blood vessel constriction, muscular tenseness, the triggering of ulcers, and hearing loss. In several cases, excess noise can be fatal.

There are three basic considerations related to sound: The SOURCE (vibrating object or material), TRANSMISSION of the vibration; and the EFFECT (the sensation of hearing, plus subjective reactions to sound). Sound may be classified as noise when it becomes destructive or undesirable, causing actual physical damage or undue stress.

It becomes increasingly difficult, however, to formulate and/or substantiate any conclusions regarding the psychological effects of noise because these responses occur on such a subjective level. This is because annoyance (the term most often used when referring to the tension caused by noise) is dependent upon so many variables. A sound may be judged annoying because of its unpleasant association to an individual. Many times any "sound" can become a disturbing, irritating "noise" for the same reason: it invades one's privacy violating an individual's personal spatial territories.

While there is a considerable body of knowledge on the engineering application of acoustics (sound control and manipulation), little is known of the psychological effects of sound or noise on human performance or well-being. It is known that noise can cause tension, nervousness, emotional upset, irritability and related conditions that may effect the degree of satisfaction or task performance one may have related to the physical environment. This can have a direct link with the design of the surrounding environment, both in the initiation and propagation of noise. The effect noise may have

on individuals, or what one considers noise is certainly a subjective reaction, but it needs to be considered in the design of environments requiring mental concentration, where privacy is paramount, or where prolonged exposure may be an emotional or behavioral problem for the occupants. There is even some suspicion that there may be a link between noise and mental illness for some individuals.

Mass housing-learning environments, open plan offices and compressed urban areas are situations where a concern for the sonic environment is needed. It is hoped that this bibliography may provide some assistance in deciding on appropriate performance criteria for the design of these spaces.

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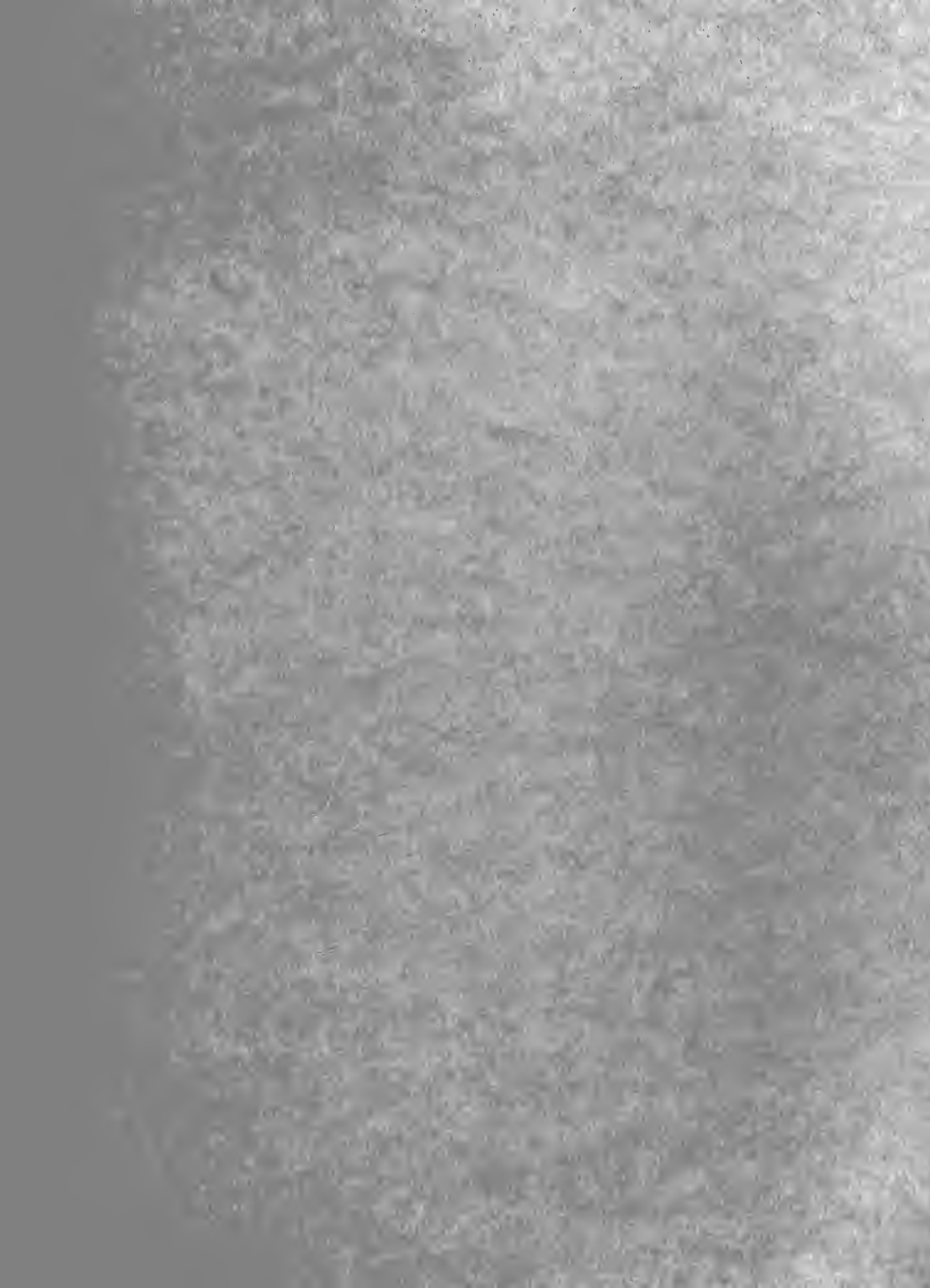
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